



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,112	03/31/2004	Siva G. Narendra	INTEL-0042	5552
34610	7590	05/12/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			DINKINS, ANTHONY	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/813,112

Applicant(s)

NARENDRA ET AL.

Examiner

Anthony Dinkins

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on <sup>15</sup>~~28~~ February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 21-24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-20 is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 8, 11, 14, 15 and 25 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 6, 9, 10, 12, 13 and 26-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Election/Restrictions***

1. In response to applicant's election of Group I, claims 1-20 and 25-30 made with traverse. Applicant argued that the search and examination of the entire application can be made without a serious burden. The examiner election/restriction requirement mailed February 3, 2005 showed that the inventions are different and would require a different class search for a capacitor and a battery therefore, the examiner restriction requirement is maintained.

***Claim Objections***

2. Claims 29 and 30 are objected to because of the following informalities:  
Regarding claims 29 and 30, change the dependency from "25" to "28" due to the recitation of "the parallel connection" is first recited in claim 28.  
Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-5-8, 11, 14-15, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (6,483,691). Nakamura et al. (6,483,691) disclose in Figure 7 an ultracapacitor, comprising a semiconductor substrate (1); N conductive layers (4, 6) on the substrate, where  $N > 2$ ; and N-1 dielectric layers (5) formed between the conductive layers respectively. Regarding claim 4, because Nakamura et al.

Art Unit: 2831

(6,483,691) teaches having the N conductive layers, then Nakamura et al. (6,483,691) would possess a uniform charge distribution among the N conductive layers. Regarding claim 5, because Nakamura et al. (6,483,691) teaches having the N conductive layers, then Nakamura et al. (6,483,691) would possess a non-uniform charge distribution among the N conductive layers. Regarding claim 6, wherein at least two of the N conductive layers (4, 6) have different widths. Regarding claim 8, Nakamura et al. (6,483,691) shows in Figure 7 wherein the N conductive layers (4, 6) include at least two adjacent conductive layers that have different width. Regarding claim 11, Nakamura et al. (6,483,691) shows in Figure 7 wherein the N conductive layers are equally spaced. Regarding claim 14, Nakamura et al. (6,483,691) discloses wherein the N-1 layers are made from the at least one of the desired recited materials for the dielectric layers, col. 6, 16-21. Regarding claim 15, wherein the oxide of the desired recited materials for the dielectric layers would be inherent due to the high dielectrics materials as stated in col. 6, lines 16-21 which would yield the recited dielectric constant. are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (6,483,691). Regarding claim 25, Nakamura et al. (6,483,691) disclose in Figure 7 an semiconductor die, comprising a semiconductor substrate (1); N conductive layers (4, 6) on the substrate, where  $N > 2$ ; and N-1 dielectric layers (5) formed between the conductive layers respectively, wherein the conductive layers (4, 6) and dielectric layers (5) store a charge corresponding to a predetermine voltage due to the structure of the recited claim 25 is met by Nakamura et al. (6,483,691).

***Allowable Subject Matter***

Art Unit: 2831

4. Claim 2-3, 6, 9-10, 12-13, 26-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claim 16-20 allowed.

***Citation of Pertinent Prior Art***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Honda et al. 6,195,249 discloses a plurality of conductive and dielectric layers but fail to disclose a semiconductor substrate.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Dinkins whose telephone number is (571) 272-1972. The examiner can normally be reached on 6:30-3:00.

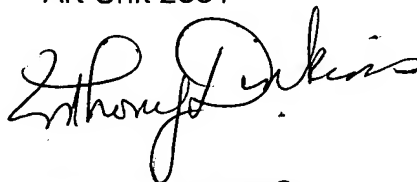
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD

Anthony Dinkins  
Primary Examiner  
Art Unit 2831

A handwritten signature in black ink, appearing to read "Anthony Dinkins", written in a cursive style.

**ANTHONY DINKINS  
PRIMARY EXAMINER**